

In re Application of Batlaw et al.
Application No. 10/764,234

APR 08 2008

REMARKS

The Pending Claims

Claims 56, 72, and 89 have been amended. Claims 57, 88, and 90 have been canceled. New claims 99-103 have been added. Claims 53-58, 61-72, and 75-103 currently are pending in the application, with claims 53-55, 71, 85, and 98 being withdrawn from consideration.

Summary of the Office Action

The Office Action rejects claims 56-58, 64-70, 72, 78-84, and 86-88 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,286,540 (Suga et al.) (hereinafter "the Suga '540 patent") in view of U.S. Patent No. 4,357,288 (Oas et al.) (hereinafter "the Oas '288 patent").

The Office Action rejects claims 62 and 76 under 35 U.S.C. § 103(a) as allegedly unpatentable over the Suga '540 patent in view of the Oas '288 patent and U.S. Patent No. 5,049,605 (Rekers) (hereinafter "the Rekers '605 patent").

The Office Action rejects claims 61, 63, 75, 77, and 89-97 under 35 U.S.C. § 103(a) as allegedly unpatentable over the Suga '540 patent in view of the Oas '288 patent and U.S. Patent Application Publication No. US 2004/0063830 A1 (Schmidt et al.) (hereinafter "the Schmidt '830 publication").

Discussion of the Claim Amendments

Claims 56, 72, and 89 have been amended to recite that: (i) the chemical composition is injected at a rate of about 5 to about 22 grams per second through a gate having a diameter of about 1.5 mm to about 3.8 mm; (ii) the preform has a side wall having a thickness of about 1.5 mm to about 3.5 mm; and (iii) the preform is removed from the mold and allowed to cool to ambient temperature. Claim 89 has also been amended to incorporate the subject matter of claim 90 and recite that the percent haze to thickness ratio of the container side wall is less than about 0.4 percent haze per mil of thickness. New claim 99, which recites the aforementioned features of the claimed process and the container, has also been added. These amendments are supported by the claims as originally filed and the specification, for example, at pages 14-19 and 24-25. No new matter has been added by way of these amendments.

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Discussion of the Section 103 Rejections

The Office Action rejects the pending claims as allegedly obvious over the combination of the Suga '540 patent and the Oas '288 patent alone or in further view of the Rekens '605 patent or the Schmidt '830 publication. Applicants respectfully submit that the invention defined by the pending claims cannot properly be considered *prima facie* obvious over the cited references because the combinations proposed in the Office Action fail to meet all of the elements of the pending claims.

First, Applicants note that the pending claims are directed to a two-stage injection stretch blow molding (ISBM) process. In such a process, the preform is injection molded in a first step and allowed to cool to ambient temperature. The preform is then reheated to a temperature sufficient to allow the preform to be stretch blow molded into the desired article (e.g., a container). By way of contrast, the Oas '288 patent and the Suga '540 patent appear to be principally directed toward one-stage ISBM processes. As noted in the specification, a one-stage ISBM process involves the injection molding and stretch blow molding of the preform to form the article. In this process, the preform is not allowed to cool ambient temperature before being stretch blow molded. Rather, the residual heat from the molding of the preform allows the preform to be stretch blow molded with no or only minimal supplemental heating. While Applicants acknowledge that the Suga '540 patent appears to suggest that the container disclosed therein can be made using a two-stage ISBM process, Applicants note that ISBM examples described in the Suga '540 patent are all one-stage ISBM processes (see, the Suga '540 patent at col. 6, lines 36-64).

Second, Applicants note that neither the Suga '540 patent nor the Oas '288 patent disclose the diameter of the "gate" through which the polymer composition is injected into the mold. As set forth in the specification, Applicants believe that the experimental evidence shows that the diameter of the gate and the rate at which the polymer composition is injected are process parameters having a substantial influence on the optical properties of the finished article or container.

Third, Applicants submit that neither the Suga '540 patent nor the Oas '288 patent disclose a two-stage ISBM process that produces polypropylene containers exhibiting the ratio of percent haze to thickness recited in the pending claims. In particular, Applicants note that each of the pending claims recites that the ratio of the percent haze of the container side to the thickness of the container side wall (in mils)

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is less than about 0.4 percent haze per mil of thickness. The containers produced by the process disclosed in the Suga '540 patent, which is the only cited reference that even mentions a two-stage ISBM process, exhibited ratios ranging from approximately 1 percent haze per mil of thickness to approximately 2.2 percent haze per mil of thickness (see, e.g., Examples 1-8 and Comparative Examples 1-6 of the Suga '540 patent). These values are far outside the range recited in the pending claims. Moreover, Applicants note that the process used in each of those examples was a one-stage ISBM process (see, the Suga '540 patent at col. 6, lines 36-64). While the bottles produced in Comparative Examples 7-13 appear to have lower ratios, Applicants note that each of these examples used an extrusion blow molding process, not an ISBM process.

Furthermore, Applicants respectfully submit that it would not have been a matter of routine skill or optimization to modify the processes disclosed in the cited references to arrive at the claimed subject matter. Rather, Applicants submit that the development of a workable two-stage ISBM process capable of producing such containers required the discovery of the interdependence of several factors/process parameters and the discovery of the correct relationship between these factors/parameters. Applicants submit that the experimental data set forth in the application demonstrates this interdependence and relationship and their effects on the ability of a two-stage ISBM process to produce an article having the desired optical properties.

Applicants respectfully submit that neither the Schmidt '830 publication nor the Rekers '605 patent cure the deficiencies of the Suga '540 patent and the Oas '288 patent. In particular, neither reference appears to specifically disclose a two-stage ISBM process, much less the particular parameters of the process recited in the pending claims.

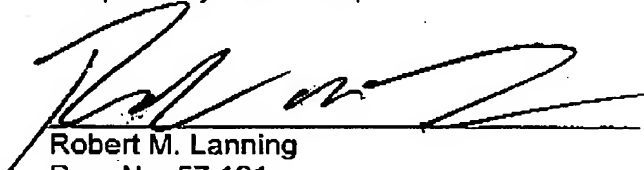
In view of the foregoing, Applicants respectfully submit that the subject matter defined by the pending claims cannot properly be considered *prima facie* obvious over the references cited in the Office Action. In particular, Applicants submit that the combinations proposed in the Office Action fail to meet or provide all of the elements recited in the pending claims. Accordingly, Applicants request that the Section 103 rejections of the pending claims be withdrawn.

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Conclusion

In view of the foregoing, the application is considered in proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone interview would expedite prosecution of the instant application, the Examiner is invited to call the undersigned.

Respectfully submitted,



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